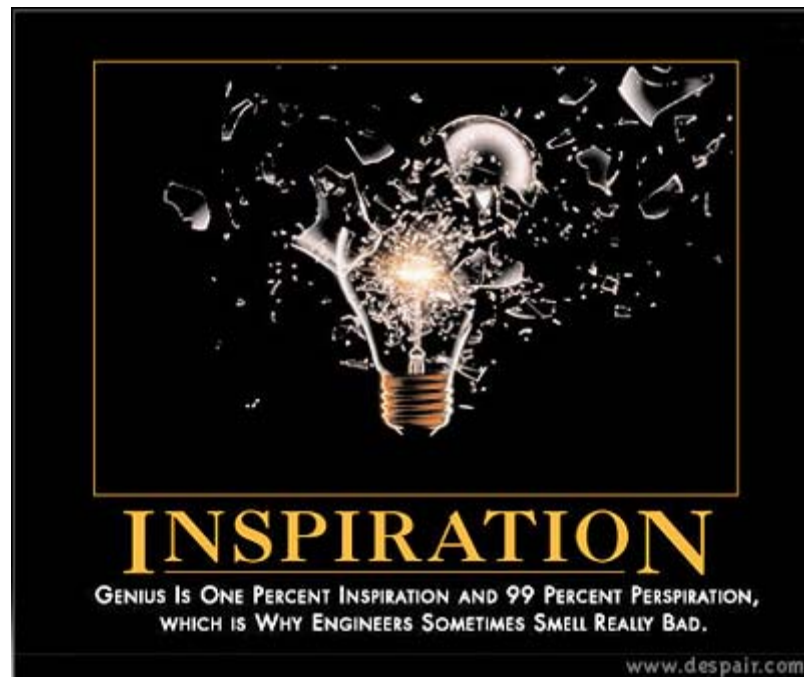


NASA Engineering Network Sharing Knowledge Across NASA's Engineering Community

Manson Yew

February 6, 2006

Introduction to the NASA Engineering Network



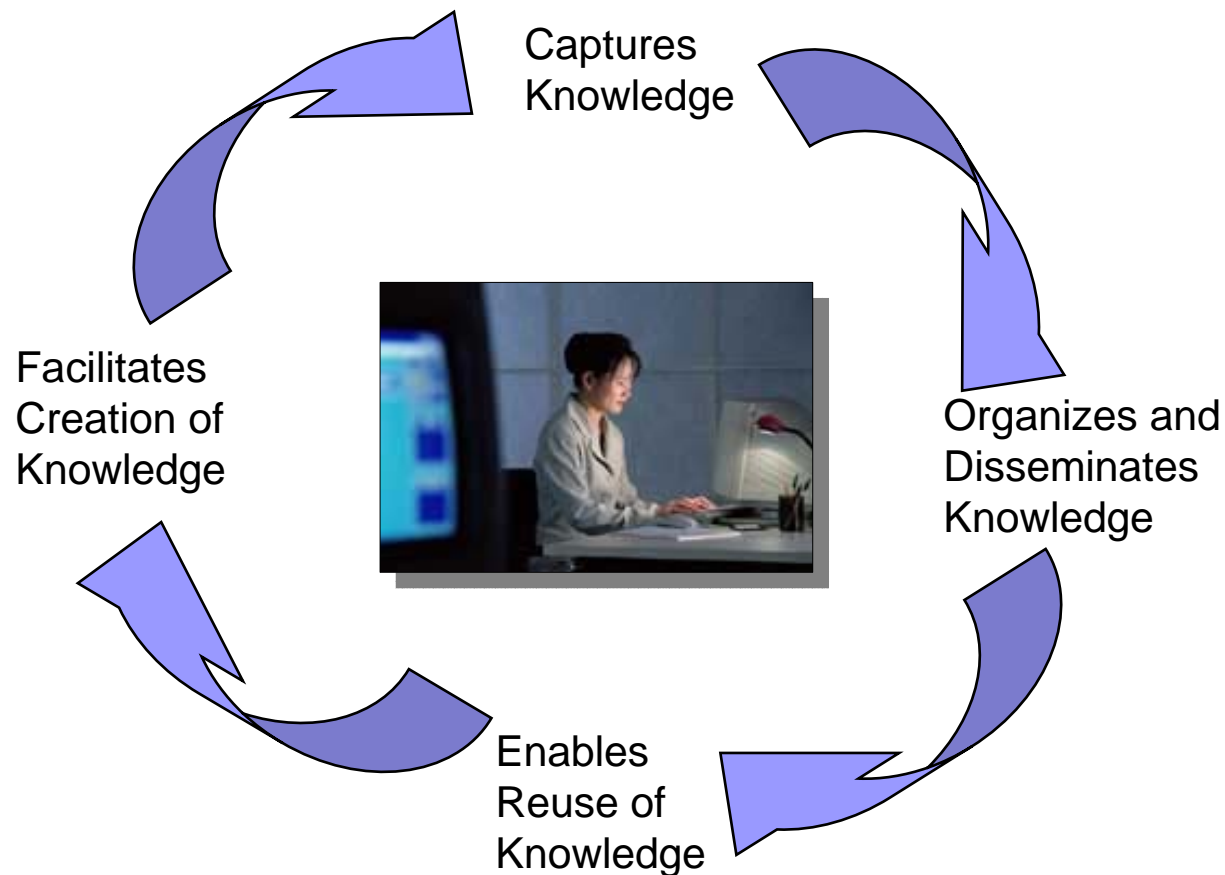


Introduction to the NASA Engineering Network

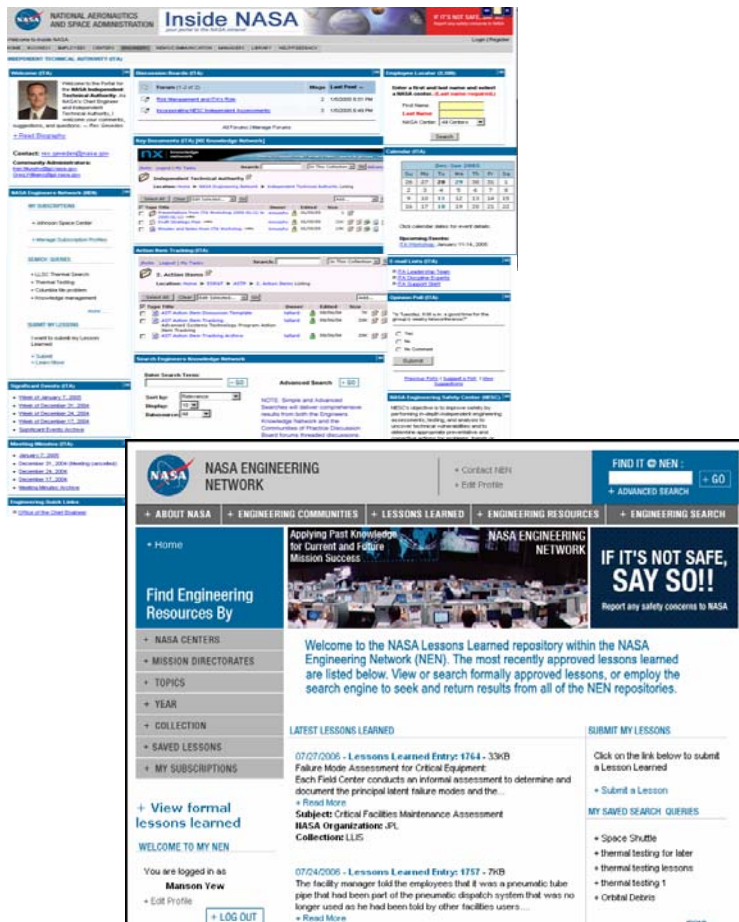
- ...fact is, there is a lot of perspiration involved in the hard work of NASA Engineering

Introduction to the NASA Engineering Network

- Every engineer needs access to all NASA engineering knowledge



Introduction to the NASA Engineering Network



- The Office of the Chief Engineer created the NASA Engineering Network to be a robust, flexible knowledge management system that
 - networks users to NASA's vast knowledge resources, both documented and tacit
 - provides a multi-purpose community management tool, task management tool, and lessons learned tool
 - allows for managing and sharing of discipline standards, requirements and processes with a minimum of labor
- NEN integrates a content management system, portal, search engine, and engineering community management system in support of engineering discipline communities and NASA lessons learned

Key Knowledge Resource – NASA Lessons Learned

The screenshot shows the NASA Engineering Network (NEN) website. The main content area is titled 'LESSONS LEARNED' and features a list of lessons learned. Two lessons are highlighted:

- 07/27/2006 - Lessons Learned: Failure Mode Assessment for Each Field Center conducts an document the principal intent to**
 Subject: Critical Facilities Main NASA Organizations JPL Collection: LLS
- 07/24/2006 - Lessons Learned: The facility manager told the engine that had been part of the engine longer used as he had been told**
 Read More

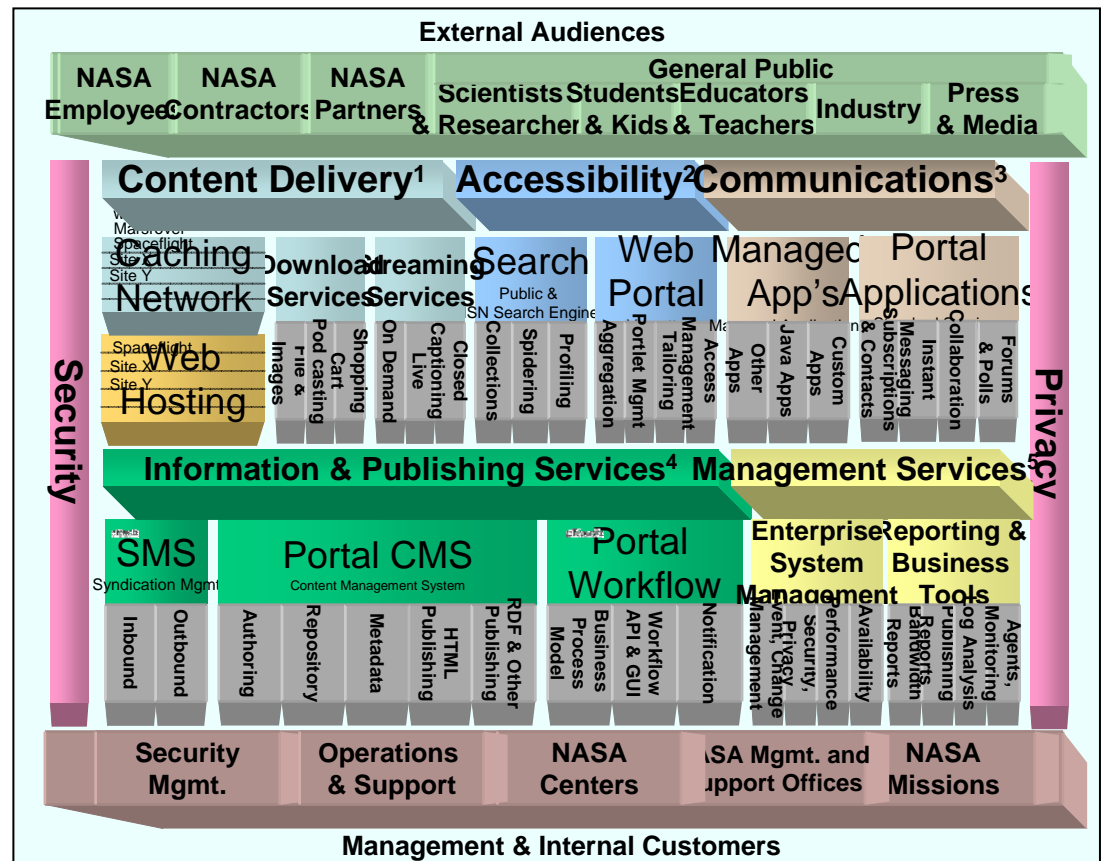
The sidebar on the left contains a 'Find Engineering Resources By' section with categories: NASA CENTERS, MISSION DIRECTORATES, TOPICS, YEAR, COLLECTION, SAVED LESSONS, and MY SUBSCRIPTIONS. Below this is a 'WELCOME TO MY NEN' section showing the user is logged in as 'Manson Yew' with a 'LOG OUT' button.

At the bottom of the page, there is a 'SUBMIT A LESSON' form. The form includes fields for 'Submitted By' (First Name, Last Name), 'Submitter's Phone Number', 'Submitter's Email Address', and 'Point of Contact (if different from submitter)' (First Name, Last Name, Phone Number, Email Address). The form also includes a 'SUBMIT A LESSON' button and a 'Cancel' button.

- 1,602 fully vetted Lessons Learned going back to 1972
- Managed by Lessons Learned Steering Committee with representation from all 10 NASA Centers
- Pro: represents NASA's highest validity of reusable knowledge
- Con: not a complete body of NASA knowledge

Key Knowledge Resource -- Engineering Databases

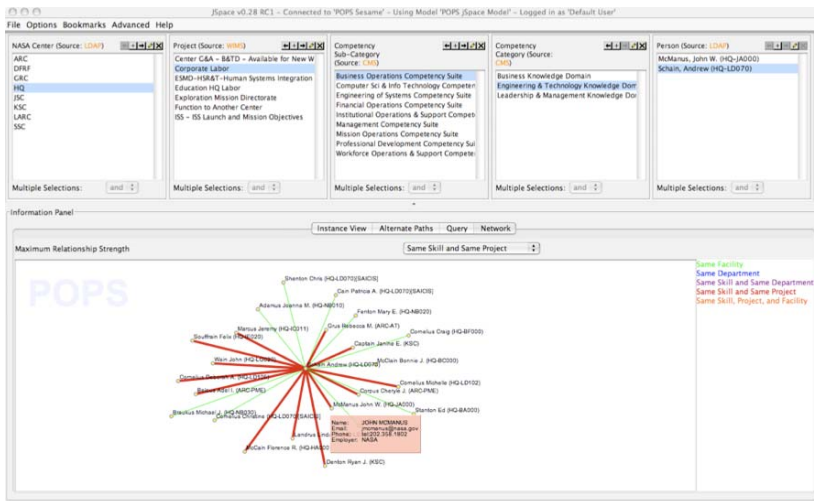
- NASA has a wealth of data management systems, problem reporting and corrective action systems, document management systems, technical report systems
- Pro: extensive set of NASA knowledge
- Con: validity issues, context issues, seemingly never-ending number of db's



Key Knowledge Resource – Subject Matter Experts



- NASA employs over 46,000 civil servant and contractor engineers representing some of the nation's best and most educated intellectual resources
- Pro: our best knowledge resource
- Con: not easily discovered, have something better to do than sit around waiting for your questions

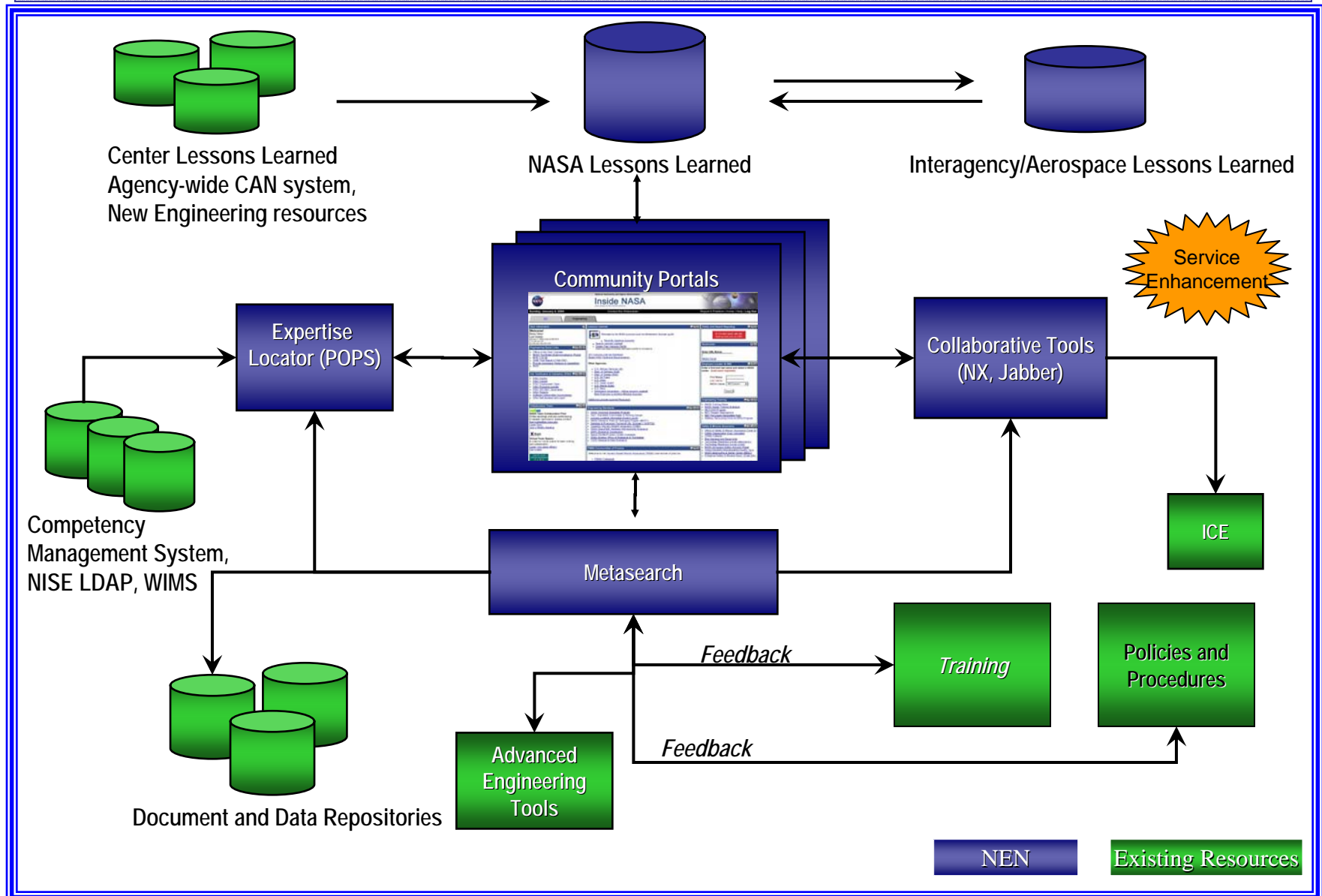


Industry Benchmarking

- Formal benchmarking meetings conducted with the following organizations have led to NEN architecture as recognized best practice
- In addition, meta-analysis of published case studies and informal benchmarking also contributed to key architectural decisions and choices


| | |
|---|---------------------------------|
| The Aerospace Corporation | Department of Commerce |
| US Army | Rand Corporation |
| MITRE | EPRI |
| Lockheed Martin Space Systems | JHU/Applied Physics Lab |
| Raytheon | Department of Homeland Security |
| Nuclear Regulatory Commission | Department of Energy |
| Intel | Procter and Gamble |
| Boeing Canoga Park | Rolls Royce Aerospace |
| Harvard University Learning Innovations Laboratory | Ball Aerospace |
| Australian Taxation Office | |

Functional Architecture of NEN



Finding Solutions

The screenshot shows the NASA Lessons Learned Knowledge Network homepage. At the top left is the NASA logo. The main header reads "LESSONS LEARNED KNOWLEDGE NETWORK". To its right is a link "+ Contact LLKN". Below the header is a navigation bar with three tabs: "+ ABOUT LLKN", "+ MY LLKN", and "+ COMMUNITIES". On the far right is a search box labeled "ADVANCED SEARCH" with a "+ GO" button. The main content area is divided into three columns. The left column has a blue sidebar with "Find Lesson Learned By" and filters for NASA CENTERS, ENTERPRISE, CROSSCUTTING PROCESSES, TOPICS, BY YEAR, and BY COLLECTION. The middle column features a large image of a control room with the title "APPLYING PAST KNOWLEDGE FOR CURRENT AND FUTURE MISSION SUCCESS" and "LESSONS LEARNED KNOWLEDGE NETWORK". The right column shows a colorful abstract graphic titled "LESSONS LEARNED KNOWLEDGE NETWORK" and "SATURN Join the observation campaign". A central banner reads: "Welcome to the new Lessons Learned Knowledge Network. This online knowledge management system brings you NASA's official lessons learned as well as a variety of online knowledge management tools for discovering NASA's vast engineering resources." Below this are sections for "LATEST LESSONS LEARNED" listing two reports from ATCS and ECLSS, and a "LOG IN TO MY LLKN" section with fields for Username and Password, a "+ SIGN IN" button, and a "WHY REGISTER?" link.



NASA ENGINEERING NETWORK

+ CONTACT NEN
+ EDIT PROFILE
[+ FIND IT CEN : + GO](#)
[+ ADVANCED SEARCH](#)

[+ ABOUT NASA](#)
[+ ENGINEERING COMMUNITIES](#)
[+ LESSONS LEARNED](#)
[+ ENGINEERING RESOURCES](#)
[+ ENGINEERING SEARCH](#)

+ Home

Find Engineering Resources By

- + NASA CENTERS
- + MISSION DIRECTORIES
- + TOPICS
- + YEAR
- + COLLECTION
- + SAVED LESSONS
- + MY SUBSCRIPTIONS

SIMPLE SEARCH

Enter Search Term:

[+ GO](#)

SORT BY:
 Display: 10
 Datasource: All

[+ SAVE](#)

RESULTS

Lessons Learned: 1 - 10 of 290 returned, 1953 hits (1 seconds)
 + Prev 1 2 3 4 5 + Next

| | |
|---|--|
| <p>MIL-STD-883 - Department Of Defense Test Method Standard MIL ... - 4.4MB</p> <p>Description: Class M devices shall use the conditions specified in the test methods herein for class level B product. Intended use provisions for the use of MIL-STD-883 Abbreviations Classification of tests Orientation Electrical test... Creato: Non-NEPP, Author Collection: NEPP</p> | <p>40% <div style="background-color: #ccc; height: 10px; width: 100%;"></div></p> <p>10 Mar 03 + Find Similar</p> |
| <p>MIL-STD-756 - Department Of Defense Test Method Standards Se ... - 5.7MB</p> <p>Description: This standard establishes uniform methods for testing semiconductor devices, including basic environmental tests to determine resistance to deleterious effects of natural elements and conditions surrounding military operations... Creato: Non-NEPP, Author Collection: NEPP</p> | <p>40% <div style="background-color: #ccc; height: 10px; width: 100%;"></div></p> <p>10 Mar 03 + Find Similar</p> |
| <p>Lead-Free Soldering for Space Applications TROBKO (Appd's) ... - 2.7MB</p> <p>Description: Free Solder Joint Reliability of High-Density Packages APEX-CD 18. Lead-Free Design --High-Density Packages The High Density Packaging Users Group (HDPUG) has conducted a substantial study of solder joint reliability of high-density... Creato: Hessel, Kurt Collection: NEPP</p> | <p>40% <div style="background-color: #ccc; height: 10px; width: 100%;"></div></p> <p>20 Jun 05 + Find Similar</p> |
| <p>Fifty Years of Flight Research: An Annotated Bibliography of ... - 10.0MB</p> <p>Description: C n 7 K n ? a = C 1 7 K n ? a C n 7 = C n 7 - 7 0 I z C 1 7 k v * V h l t c o m b area rule Yawing moment Vertical flow structure concept F.S. 142 180 270° 90° 0° Nose ring pressure orifices F.S. 70 F.S. 85 F.S. 107 F.S. 142 F.S. 184... Creato: David F. Fisher Collection: NTRS:DTRS</p> | <p>40% <div style="background-color: #ccc; height: 10px; width: 100%;"></div></p> <p>+ Find Similar</p> |
| <p>Effects of varied loading paths on fatigue endurance part 1 ... - 13.7MB</p> <p>Description: No Abstract Available Creato: G. P. Tilly Collection: NTRS:ARC</p> | <p>39% <div style="background-color: #ccc; height: 10px; width: 100%;"></div></p> <p>31 Dec 64 + Find Similar</p> |
| <p>311-NIST-001 Rev. A - 879KB</p> <p>Description: (2) 20% of contacts, Four Min Notes at end of Table 2H Section B 311-NIST-001 Connectors Page 13 of 42 Revision A (08/86) Table 2B SCREENING REQUIREMENTS FOR D-SUBMINIATURE CONNECTORS (REF MIL-C-24308, S-311-P-14, S-311-P-10)... Creato: Reference Only, NASA Document Collection: NEPP</p> | <p>39% <div style="background-color: #ccc; height: 10px; width: 100%;"></div></p> <p>17 Jun 03 + Find Similar</p> |
| <p>Microsoft Word - Final Report - Vol. Ldoc - 10.5MB</p> <p>Description: The plan for the test series was to demonstrate safe operation of the Pratt & Whitney High Pressure Fuel Turbopump (HPFT/PAT) at the High Pressure Fuel Turbine discharge temperature (HPFT DS T) redline values. At engine start... Collection: LLIS</p> | <p>39% <div style="background-color: #ccc; height: 10px; width: 100%;"></div></p> <p>+ Find Similar</p> |
| <p>PPL-21 Notice 1 - 1.2MB</p> <p>Description: 1 PPL-21 (OSFC) Notice 1 May 1996 OSFC Preferred Parts List To ALL HOLDERS OF OSFC PRL-21 1. THE FOLLOWING PAGES OF PRL-21 HAVE BEEN REVISED AND SUPERSEDED THE PAGES LISTED: NEW PAGE DATE SUPERSEDED PAGE DATE iv-a May 1996 NEW PAGE... Creato: Reference Only, NASA Document Collection: NEPP</p> | <p>39% <div style="background-color: #ccc; height: 10px; width: 100%;"></div></p> <p>17 Jun 03 + Find Similar</p> |

By Collection (195)

- + LLIS (85)
- + BMP COE (1)
- + ESH-DUE (8)
- + ISS-PRACA (490)
- more ...

Topics (172)

- + Ames Research Center (1)
- + Glenn Research Center (8)
- + Goddard Space Flight Center (92)
- + Jet Propulsion Laboratory (22)
- + Johnson Space Center (21)
- + Kennedy Space Center (2)
- + Marshall Space Flight Center (21)
- + NASA Headquarters (1)
- + Stennis Space Center (1)
- + White Sands Test Facility (2)

Topics (78)

- + Administration / Organization (2)
- + Aerospace Safety Advisory Panel (1)
- + Air-Traffic Management (1)
- + Aircraft (24)
- more ...

By Year (1694)

- + 1970's (27)
- + 1990's (227)
- + 2000-2003 (817)
- + 2004 (61)
- more ...

Mission Directories (381)

- + Aeronomics Research (277)
- + Exploration Systems (380)
- + Science (965)
- + Space Operations (275)

http://cdorum.com/content/pdf/cr189.pdf - 1.7MB 39%

Search across multiple repositories.
Faceted navigation
to drill down into results

Finding Solutions (cont.)

+ Home

Find It @ NASA

+ SIMPLE SEARCH

+ ADVANCED SEARCH

+ CATEGORY SEARCH

+ SEARCH TIPS

+ POPULAR SEARCH TERMS

+ MULTIMEDIA SEARCH

SIMPLE SEARCH

Enter Search Term:

mars exploration

+ GO

BEST BETS

Structures
[chandra Home Page](#)
[NASA Home Page](#)
[JPL Home Page](#)
[Education Home Page](#)

NEN Community
[chandra Home Page - Description](#)
[NASA Home Page - Description](#)
[JPL Home Page - Description](#)
[Education Home Page - Description](#)

RESULTS

Documents: 1 - 10 of 200 returned, 57633 hits

+ Prev 1 2 3 4 5 + Next

Mars Exploration Curriculum Integration Ideas

Mars Exploration Curriculum is a science curriculum for students in grades 4-12. It is designed to connect students with NASA's current Mars research and uses actual data collected from the ten spacecraft NASA plans to send to...

<http://mars.jpl.nasa.gov/education/modules/webpages/integrationideas.htm> - 13KB

99% ██████████

14 Dec 99

+ Find Similar

+ Highlighted

NASA National Aeronautics and Space Administration

Inside NASA

You are logged in as Manson View

Home Business Centers Education Employees Engineers Emergency Operations Managers Program/Project Management News & Library Help & Feedback Portal Metrics Usability Study My Pages

Dev LLC Demo Engineering Management Board Nondestructive Evaluation Knowledge Management Software Engineering Structures

Welcome (Structured)

Read: [What is Structures?](#)

Lead Facilitator: Gregory L. Williams@gal.nasa.gov

Co-Facilitator: Kari S. Murphy@gal.nasa.gov

Expert Biographies (Structured)

Suggestions (Structured)

Search Engineering Repositories

Structures Document Archive (Raw TAI)

Engineering Standards

Announcements (Structured)

What's HOT (Structured)

Click to View "Greybeard Advice"

Structures Document Archive (Raw TAI)

Engineering Standards

Discussion Board (Structured)

Calendar (Structured)

End User

Administrator Only

Events

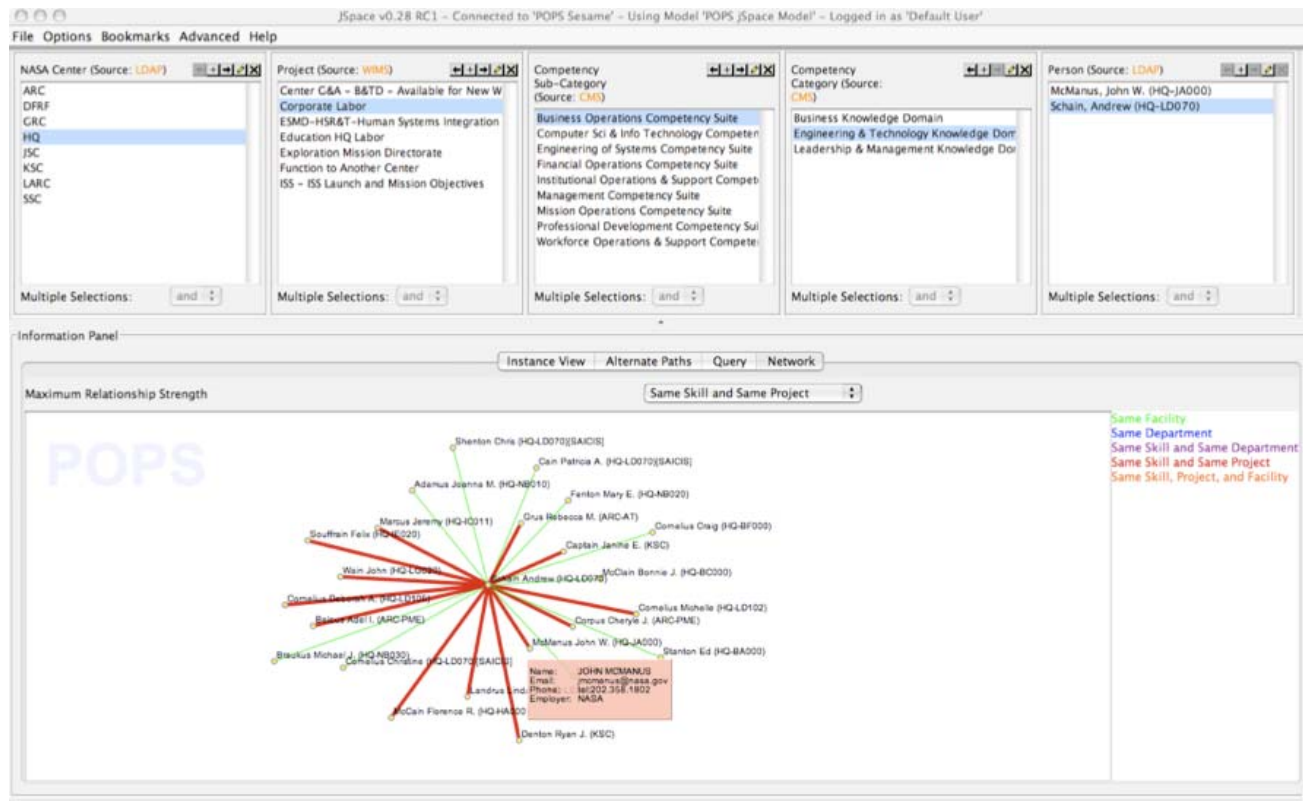
Structures Quick Links

Engineering Associations (Structured)

NEN searches may lead to
community of expert
practitioners

Finding Solutions (cont.)

NEN communities provide a variety of expert locator tools



Disseminating Lessons and Best Practices

The screenshot shows the 'Inside NASA Structures' web portal. Red circles and arrows highlight specific features:

- Discussions on key topic areas:** Points to the 'Discussion Board (Structures)' section, which lists various technical topics like 'Verified Mathematical Models of Newer Materials and Fabrication Forms'.
- Greybeards' advice:** Points to the 'What's HOT (Structures)' section, specifically the 'Advice for New Engineers' article.
- Key community documents:** Points to the 'Structures Document Archive (Non-ITAR)' section, which lists documents like 'Archive - 2005 and Earlier', 'Bob Ryan's Papers', 'Photos', 'Presentations', 'Seminars', 'Standards', 'Greybeard Advice', 'Photo Album.ppt', and 'SPRT Minutes - October 11'.
- Engineering standards:** Points to the 'Engineering Standards' section at the bottom, which includes the 'NASA Technical Standards Program'.

Other visible sections include 'Welcome (Structures)', 'Announcements (Structures)', 'Expert Biographies (Structures)', 'Suggestions (Structures)', 'Search', and 'Calendar (Structures)'.

Disseminating Lessons and Best Practices (cont.)

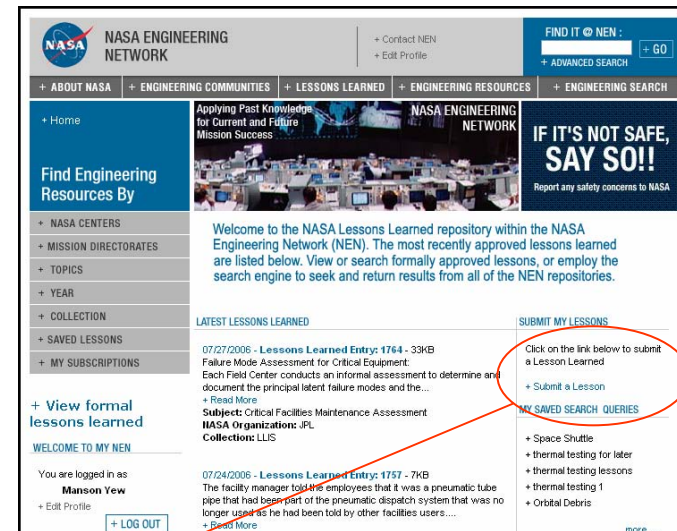
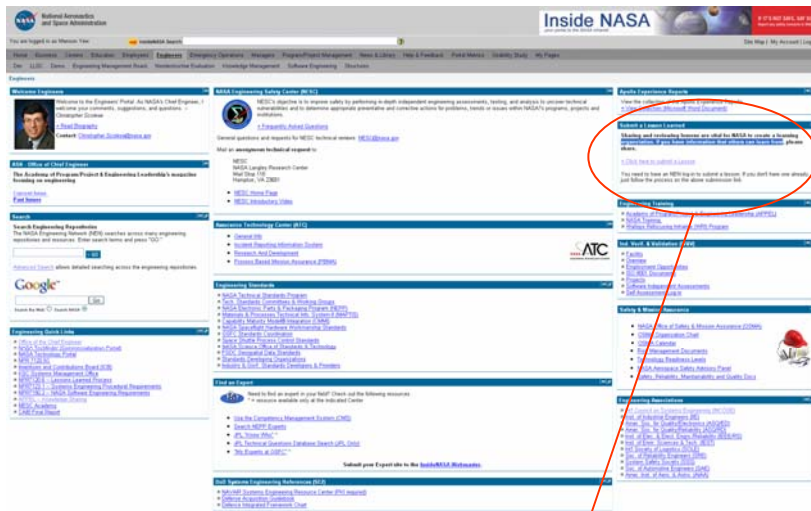
The screenshot shows the NASA Lessons Learned Steering Committee (LLSC) website. The page is titled "Welcome to the Lessons Learned Steering Committee" and includes a navigation bar with links such as Home, Business, Centers, Education, Employees, Engineers, Emergency Operations, Managers, Program/Project Management, News & Library, Help & Feedback, Portal Metrics, Usability Study, and My Pages. The main content area is divided into several sections:

- Welcome (LLSC):** A section with a welcome message from Gena Henderson, a photo of her, and contact information for Lead Facilitator Celeste Meryman and Co-Facilitator Manson Yee.
- What's Happening in Lessons Learned:** A section with a "Current" tab and a list of recent events, including the LLSC Monthly Telecon on December 13, 2006, and the International Symposium on Product Quality & Integrity on January 22-25, 2007.
- Discussion Board (LLSC):** A section with a "Forum (1-6 of 8)" and a list of topics, including "Problem and Work-Arounds for Lesson Submissions" and "Lessons Learned from the LLSC".
- Key Documents (LLSC):** A section with a list of documents, including "Lesson Learned Documents", "Lesson Learned Handbooks", "NEN Documents", "NEN Issues Tracking", "Project Documents", "Training Documentation", "Draft Lessons Learned Steering Committee Charter", "Lessons from LLSC/NEN", "LLSC Contact List", and "October NEN Presentation - RIG".
- Submitted Lessons Learned:** A section with a "Submitted Lessons Learned" list, including a highlighted entry titled "Failure Mode Assessment for Critical Equipment" dated 07/27/2006.

A red circle highlights the "Submitted Lessons Learned" section, and an arrow points from the text "Push relevant lessons learned to communities" to this section.

Push relevant lessons learned to communities

Capturing and Sharing Lessons



NASA ENGINEERING NETWORK

+ ABOUT NASA + ENGINEERING COMMUNITIES + LESSONS LEARNED + ENGINEERING RESOURCES + ENGINEERING SEARCH

Home

Find Engineering Resources By

- NASA CENTERS
- MISSION DIRECTORATES
- TOPICS
- YEAR
- COLLECTION
- SAVED LESSONS
- MY SUBSCRIPTIONS

By Collection (297861)

- LLIS (1622)
- BMP/COE (78)
- Clementine Mission (14)
- Earth Observing (7)
- more ...

NASA Centers (2008)

- Ames Research Center (87)
- Dryden Flight Research Center (22)

SUBMIT A LESSON

Lesson Details > Lesson Metadata > Lesson Supporting Material

Please enter the information below. Clicking on the "Next Step" button at the bottom of the page will save the information you have entered and take you to the next step. If you choose to complete the lesson at a later time you may retrieve this lesson from the "Saved Lessons" page.

Please do not use the browser's "Back" button during the lesson submittal process. As you complete each step in the process, the Lesson detail line above will enable you to navigate back to the steps that have been completed. **This form will timeout in 30 minutes**

Fields marked with * are mandatory

Submitted By:

First Name: Last Name:

Submitter's Phone Number: (XXX-XXX-XXXX)

Submitter's Email Address: myew@jpl.nasa.gov

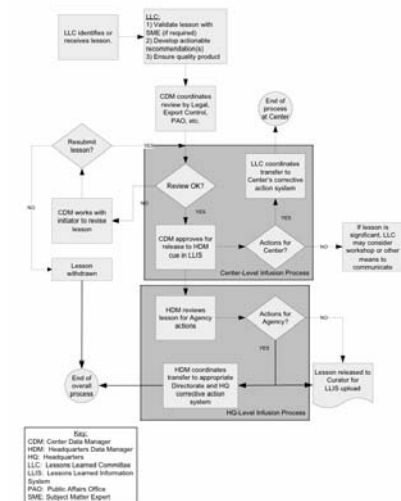
Point of Contact (if different from submitter):

First Name: Last Name:

Phone Number: (XXX-XXX-XXXX)

Email Address:

Multiple entries to the same submission form and workflow controlled lessons learned process

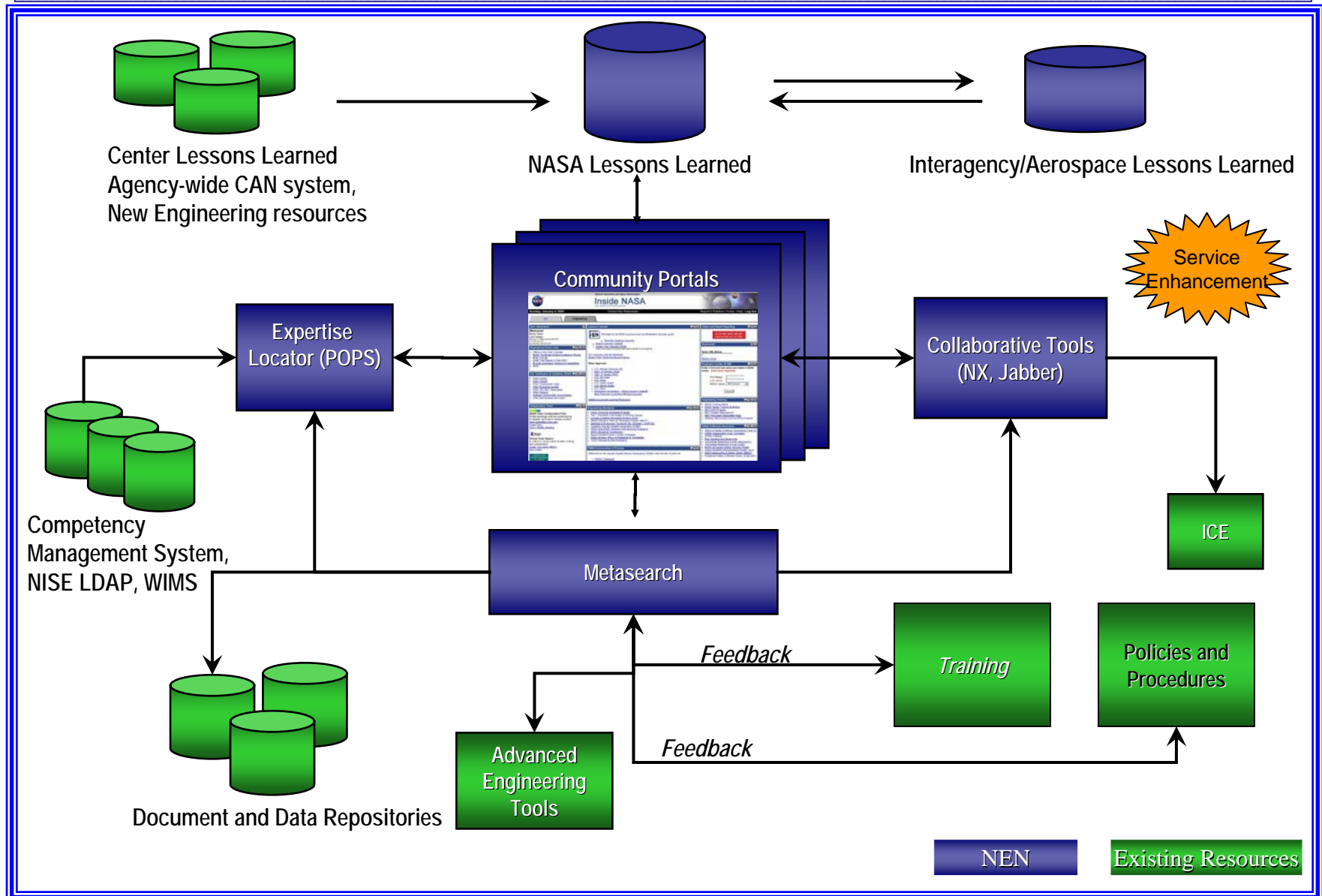


Policy Makers Embedding Lessons into Processes

The screenshot displays the NASA System Engineering Handbook website. The interface includes a top navigation bar, a sidebar with various links, and a main content area. A central diagram illustrates the structure of the handbook, with a central box labeled 'System Engineering Handbook' and arrows pointing to various sub-topics. The bottom section, titled 'Key Documents', is circled in red and lists several documents, including 'Key Documents', 'System Engineering Handbook', and 'System Engineering Handbook Team'.

NASA System Engineering Handbook rewrite team using NEN to collaborate among 60+ subject matter experts

Functional Architecture of NEN



More to Come

NASA National Aeronautics and Space Administration

Inside NASA
your portal to the NASA intranet

You are logged in as Manson Yew

Home Business Centers Education Employees Engineers Emergency Operations Managers **Program/Project Management** News & Library Help & Feedback Portal Metrics Usability Study My Pages

Program/Project Management

Welcome (PM)

Welcome to the Program/Project Management Community. I am the Chair of the Program & Project Management Board. I welcome your ideas and experiences. - Michael Blythe

+ Read Biography

Contact: Michael P. Blythe

Co-Facilitators: Celeste Merryman, Daria Topousis

Project Management Announcements

PM Challenge 2007

Registration is now open for PM Challenge 2007. The conference will take place February 6 and 7 in Galveston, Texas. For more information see <http://pmdchallenge.gsfc.nasa.gov/>.

7120.5 Updated

The Office of the Chief Engineer has submitted 7120.5 Rev. D into NODIS for comment.

Project Management Calendar

End User Administrator Only

December 2006

S M T W T F S

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

New Event Today's Events

Search

Search Engineering Repositories

The NASA Engineering Network (NEN) searches across many engineering repositories and resources. Enter search terms and press "GO."

Advanced Search allows detailed searching across the engineering repositories.

Google

Search the Web Search NASA

Submit a Lesson Learned

Sharing and reviewing lessons are vital for NASA to create a learning organization. If you have information that others can learn from, please share.

+ Click here to submit a Lesson

You need to have an NEN log-in to submit a lesson. If you don't have one already, just follow the process on the above submission link.

Discussion Board (PM)

Below is a list of discussion forums. Click on a forum to view related topics.

| Forum (1-7 of 7) | Msgs | Last Post |
|--|------|--------------------|
| Schedules and Approvals | 2 | 12/15/2006 5:18 PM |
| New Definitions in 7120.5 (D) | 3 | 12/14/2006 6:30 PM |
| Dollar Threshold for Projects | 2 | 12/14/2006 6:15 PM |
| Project Reviews and Review Boards | 2 | 12/14/2006 6:06 PM |
| Programatic Direction to Projects | 1 | 12/14/2006 6:04 PM |
| Decision Authority for Projects | 3 | 12/14/2006 6:01 PM |
| Key Differences between revision C and D | 0 | N/A |

All Forums | Manage Forums

Key Documents (PM)

| Type Title | Owner | Edited | Size |
|--|--------|----------|------|
| Program Management Toolkit (PMT) Users Guide | ameans | 08/18/06 | 6 MB |

POLARIS

Program/Project Online Library And Resource Information System

<https://polaris.nasa.gov>

NPR 7120.5 Acronyms
NPR 7120.5 Definitions
Program and Project Planning

Program & Project List
Checklists
Tools

NASA Project Management

- NASA Program and Project Management Processes and Requirements (7120.5C)
- Latest Program and Project Management Lessons from Lessons Learned Database
- NASA Earned Value Management

Learn Project Management with NASA APPEL

Whether you are a project management newbie, or a seasoned professional, NASA's Academy of Program/Project Engineering Leadership is a great place to learn.

- APPEL.nasa
- Case Studies
- 100 Lessons Learned for Project Managers
- What Makes a Good Manager?
- News & Events
- ASK Magazine
- ASK OCE

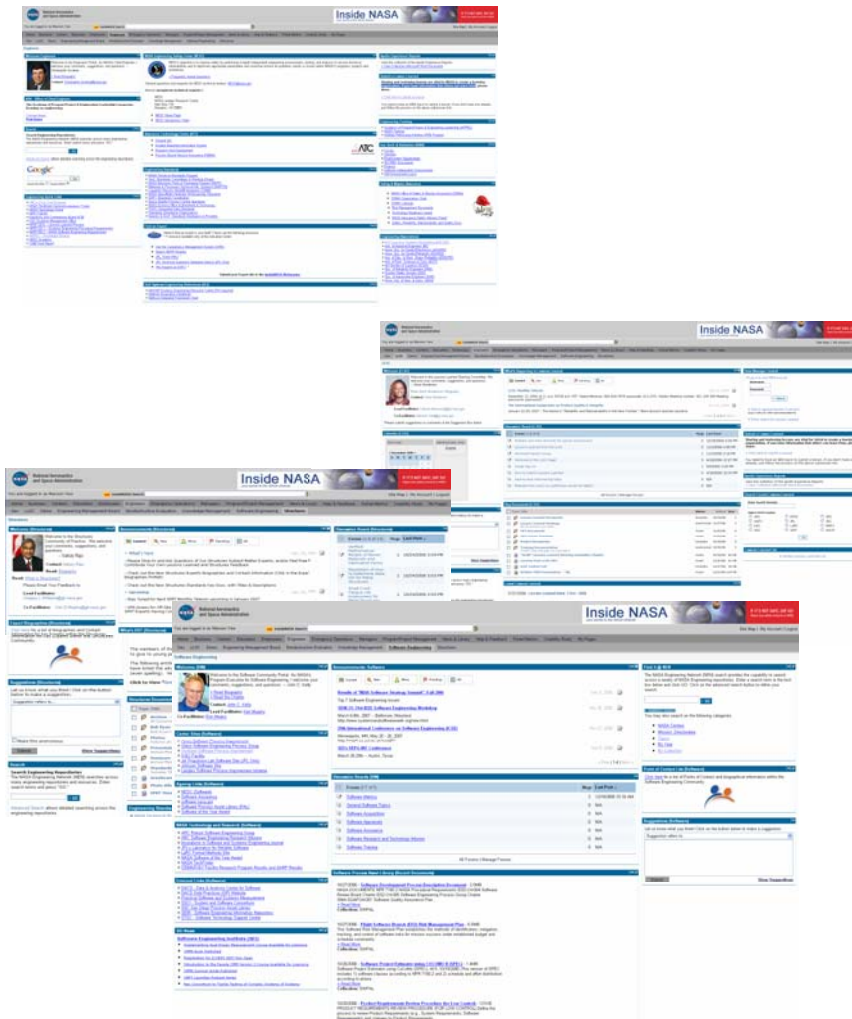
Project Management in Government

- Program & Project Management Articles in Gov. Computer News
- Program and Project Management in the UK
- Project Management in Tasmanian Government
- U.S. Army Corps of Engineers Project Management

Industry Project Management Associations

- PM Boulevard
- Project Management Center
- Project Management Institute

More to Come (cont.)



- 7 Communities in operation
- 24 Engineering Disciplines identified
- Aligned with Tech Fellows program

More to Come

- Indexed 28 repositories, target 43 repositories

The screenshot displays the NASA Engineering Network (NEN) website. The header includes the NASA logo, the text "NASA ENGINEERING NETWORK", and a "Contact NEN" link. A search bar is located in the top right corner with the text "FIND IT @ NEN:" and a "GO" button. Below the header is a navigation bar with links: "ABOUT NASA", "ENGINEERING COMMUNITIES", "LESSONS LEARNED", "ENGINEERING RESOURCES", and "ENGINEERING SEARCH".

The main content area is divided into two columns. The left column contains a sidebar with the following links: "NASA Home", "HOME", "OVERVIEW", "OFFICE OF THE CHIEF ENGINEER", "LEARNING", "PROJECT MANAGEMENT", "RISK MANAGEMENT", and "TECHNICAL STANDARDS". Below these links is a section titled "NASA KNOWLEDGE" with the text: "Changing NASA's culture is a significant and critical undertaking. We must put in place structures and practices that continually emphasize the critical role of safety and mission assurance while we adhere to sound engineering practices.... The character of our culture will be measured by the strength of NASA's leadership commitment to continuously improve safety and engineering rigor, and to share and implement lessons learned. --NASA Implementation Plan for ISS Continuing Flight".

The right column features a large banner image with the text "Applying Past Knowledge for Current and Future Mission Success" and "NASA ENGINEERING NETWORK". Below the banner is a section titled "The NASA Engineering Network provides a practical system that institutionalizes NASA's experiences and enhances a NASA engineer's competencies and growth." This section is further divided into "FEATURES" and "RESOURCES".

FEATURES

- Repositories Indexed by NEN**
- LLIS - Lessons Learned Information System**
NASA official lessons learned from over fifty years in the aeronautics and space business are collected in the LLIS to enable the knowledge gained from past experience to be applied to current and future projects. These lessons are a part of the NEN.
- OSP - Orbital Space Plane Lessons Learned**
The Orbital Space Plane Lessons Learned represent the NASA lessons learned from the Orbital Space Plane program. These lessons are a part of the NEN.
- IIASA Public Portal - www.nasa.gov**
- Techdoc - Kennedy Space Center's Technical Documentation Server for IIASA and Contractors**
This site is located at <http://tdsearch.ksc.nasa.gov>
- HEPP - IIASA Engineering Parts and Packaging**
The NEPP Program generates technical knowledge and recommendations about electrical, electronic, electromechanical (EEE) and photonic part performance, application, failure modes, test methods, reliability and supply chain quality within the context of NASA space flight missions and hardware.
- NTRS - NASA Technical Reports Server**
NASA's published, unrestricted research reports, journal articles, conference and meeting papers, technical videos, mission-related operational documents, and preliminary data is available via the NASA Technical Report Server (NTRS) to provide students, educators, and the public access to NASA's technical literature. Some of the NASA information do not have full-text document images and documents can be ordered by contacting the NASA Center for Aerospace Information.
- Earth Observing - Earth Observing-1 Baseline Lessons Learned**
- Clementine Mission Lessons Learned**
With a trend toward smaller, focused space science missions, the Clementine experience may hold lessons for both the scientific and engineering communities as they enter an era of "smaller, cheaper, faster" missions.
- Klabs - IIASA Office of Logic Design Digital Engineering Lessons Learned**
This web site focuses on the design, analysis, verification, and test of digital systems.
- BMPCOE - Best Manufacturing Practices Center of Excellence**
Best practices survey reports on Marshall Space Flight Center and Kennedy Space Center.
- ESH-DOE - Society of Effective Lessons Learned Sharing hosted by the Department of Energy's Environment, Safety and Health**

RESOURCES

- Inside IIASA Portal for Engineers**
Find resources for NASA Engineers.
[+ Visit Site](#)
- IIASA Technical Standards Program**
NASA-wide full-text technical standards system.
[+ Visit Site](#)
- IIASA Assurance Technology Center**
SMA resources and tools.
[+ Visit Site](#)
- IPR 7126.5C**
NASA Program and Project Management Processes and Requirements.
[+ Visit Site](#)
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More to Come (cont.)

- Lessons Learned Conference
Nov. 2007
- Lessons capture tools, aids,
and resources
- Capture of key knowledge and
project system engineering
artifacts in addition to formal
lessons learned
- Embedding lessons into
processes

The screenshot displays the NASA Engineering Network (NEN) website. The header includes the NASA logo, the text "NASA ENGINEERING NETWORK", and navigation links: "ABOUT NASA", "ENGINEERING COMMUNITIES", "LESSONS LEARNED", "ENGINEERING RESOURCES", and "ENGINEERING SEARCH". A search bar is located in the top right corner with the text "FIND IT NEN" and a "GO" button. Below the header, there is a banner for "Applying Past Knowledge for Current and Future Mission Success" and a sidebar with "Find Engineering Resources By" categories: NASA CENTERS, MISSION DIRECTORATES, TOPICS, YEAR, COLLECTION, SAVED LESSONS, and MY SUBSCRIPTIONS. The main content area is titled "WELCOME TO MY NEN" and shows a list of "LATEST LESSONS LEARNED" with entries dated 07/27/2006, 07/24/2006, 04/28/2006, and 04/28/2006. Each entry includes a title, a brief description, and links to "Read More", "Subject", "NASA Organization", and "Collection". A sidebar on the right contains a "SUBMIT MY LESSONS" section with a "Submit a Lesson" button and a "MY SAVED SEARCH QUERIES" section with a list of saved queries.



For More Information

- Visit our booth for a live demonstration
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